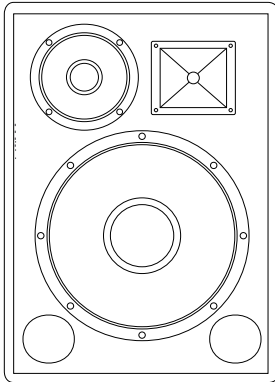




## Active and Passive Systems

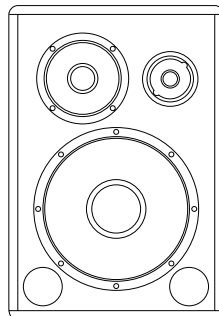
### 315-315A 3-way



**315** *passive*  
400 Watts into 8 ohms

**315A** *active*  
350 W continuous, 650 W peak  
(MosFet / processor controlled)

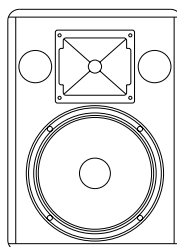
### 312-312A 3-way



**312** *passive*  
400 Watts into 8 ohms

**312A** *active*  
350 W continuous, 650 W peak  
(MosFet / processor controlled)

### 210-210A 2-way



**210** *passive*  
250 W into 8 ohms

**210A** *active*  
250 W continuous, 400 W peak  
(MosFet / processor controlled)

Montarbo ha studiato e realizzato questi sistemi acustici di avanguardia perseguendo un elementare quanto non facile obiettivo: ottenere la più alta efficienza acustica con un ingombro rigorosamente contenuto.

Nulla tuttavia è stato trascurato perché la qualità di ascolto e l'affidabilità fossero all'altezza della eccezionale pressione acustica erogata dai box 315, 312 e 210. Tale risultato, che solo l'ascolto diretto vi consentirà di verificare, è il prodotto di una lunga sperimentazione e di ripetuti affinamenti sempre condotti alla luce della nostra pluridecennale esperienza.

Come la maggioranza dei sistemi di altoparlanti Montarbo, anche questi sono disponibili nelle versioni attive 315A, 312A e 210A, ognuna delle quali incorpora un finale di potenza a MosFet progettato in funzione delle caratteristiche del sistema. Una tradizione Montarbo.

Da 30 anni, produciamo casse amplificate secondo una filosofia di estrema semplificazione del progetto, in modo da estendere i margini di affidabilità e la base di utilizzo dei nostri prodotti da sempre realizzati avendo ben presente i problemi e le necessità concrete dei singoli utenti.

Sia le versioni passive, sia quelle attive incorporano un cross-over passivo di alta qualità affiancato da un processore passivo che ottimizza il rendimento e la linearità di risposta del sistema.

In aggiunta a questo, nei sistemi attivi è incorporato un processore attivo che controlla i parametri di funzionamento dell'amplificatore e degli altoparlanti in tempo reale, per garantire le massime prestazioni senza il rischio di sovraccarichi e distorsioni.

Montarbo has developed these advanced speaker systems with a simple, but elusive goal in mind: to achieve the maximum acoustic efficiency while maintaining extremely compact overall dimensions.

We spared no efforts and spent a lot of time on continuous critical listening, repeated laboratory measurements and refinements of the design, to assure that sound fidelity and reliability are in line with the unparalleled sound pressure delivered by the enclosures 315, 312 and 210.

When you hear the excellent sound performance of these speakers, you'll agree that the results were worth our special efforts.

Like the majority of Montarbo speaker systems, they are also available in the active versions 315A, 312A and 210A, each with built-in dedicated MosFet power amplifier.

A Montarbo tradition.

For over 30 years we've been making powered speaker enclosures based on a philosophy of highly simplified design projects, thus ensuring a broad margin of reliability, and extending the application potential of our products, all of which are traditionally constructed with individual problems and concrete requirements of individual users well to the forefront of considerations.

Both active and passive versions are fitted with a high quality passive cross-over network. Inside passive versions there's a passive controller that linearizes and protects the loudspeakers. In active versions, you find an active processor that constantly monitors the operating conditions of amplifier and loudspeakers to prevent overloading and distortion.





Montarbo hat diese zukunftsweisende Boxenserie entwickelt und dabei das schwierige Ziel verfolgt: höchstmöglichen Schalldruck bei ausgesprochen geringen Abmessungen.

Es wurde an nichts gespart, um optimalen Sound und Zuverlässigkeit, die alle Montarbo-Produkte im besonderen Maße auszeichnen, auch bei den Boxen 315, 312 und 210 zu erreichen.

Dieses Ergebnis das nur durch einen direkten Soundcheck überprüft werden kann, ist auf langwierige Experimente und auf wiederholte Verbesserungen zurückzuführen, die immer unter Berücksichtigung unserer jahrzehntelangen Erfahrungen durchgeführt wurden.

Wie die meisten Montarbo Lautsprecher-systeme, sind die 315, 312 und 210 auch in den Aktivausführungen 315A, 312A und 210A verfügbar, je mit eingebauter, dedizierten MosFet Endstufe.

Eine Montarbo-Tradition.

Es ist allgemein bekannt, daß wir seit 30 Jahren Aktivboxen herstellen und daß unsere Unternehmensphilosophie darin besteht, Produkte extrem einfach zu gestalten, um durch Zuverlässigkeit und einfache Handhabung dem einzelnen Benutzer ein optimales Werkzeug an die Hand zu geben.

Neben dem Audio-Prozessor mit passiver Weiche ist jedes Aktivsystem mit einem ausgereiften Aktivprozessor versehen, der nicht nur die spezifischen Eigenschaften des jeweiligen Lautsprechers optimiert, sondern auch direkt alle Arbeitsvorgänge des gesamten internen Systems kontrolliert und sie auf diese Weise vor überflüssigen und schädlichen Überlastungen schützt.

Montarbo a étudié et réalisé ces systèmes acoustiques d'avant-garde dans la poursuite d'un objectif élémentaire mais cepen dant difficile: obtenir la plus haute efficacité acoustique dans un encombrement le plus réduit possible.

Rien n'a été négligé pour que la qualité d'écoute et la fiabilité soient à la hauteur de la pression acoustique exceptionnelle offerte par les enceintes 315, 312 et 210. Ce résultat, que seule l'écoute directe vous permettra de vérifier, est l'issue d'une longue expérimentation et d'améliorations sans cesse apportées au cours de plusieurs décennies, par notre service recherche et développement.

Comme la plupart des enceintes Montarbo ces systèmes sont disponibles tant en version passive que en version active, avec unités de puissance a MosFet incorporés conçues en fonction du système. Une tradition Montarbo.

Il est bien connu que depuis 30 ans nous réalisons des enceintes amplifiées selon une philosophie d'extrême simplification de la conception de façon à augmenter la fiabilité et la multiplicité d'utilisation de nos produits, réalisés depuis toujours en tenant compte des problèmes et des besoins réels de chaque utilisateur.

Outre le crossover passif, chaque enceinte active est dotée d'un processeur actif sophistiqué qui non seulement optimise les caractéristiques propres de chaque haut-parleur utilisé, mais contrôle directement la courbe de réponse, de même que tous les comportements de rendement du système.

Montarbo proyectó y realizó estos sistemas acústicos de vanguardia en pos de un objetivo elemental pero nada fácil: obtener la más alta eficiencia acústica en dimensiones rigurosamente contenidas. Nada fue dejado de lado para que la calidad de audición y la fiabilidad, (estandarte de toda la producción de Montarbo), estuvieran a la altura de la excepcional presión acústica suministrada por las cajas 315, 312 y 210.

Este resultado, que solo la escucha directa le permitirá verificar, es el producto de una larga experimentación y de repetidas afinaciones, siempre realizadas a la luz de la experiencia acumulada por Montarbo en el curso de varias décadas.

Como la mayoría de los sistemas de altavoces Montarbo, 315, 312 y 210 son disponibles en versiones activas (315A, 312A y 210A) que incorporan potentes finales de potencia dedicados.

Una tradición Montarbo.

Desde hace 30 años fabricamos cajas de altavoces según una filosofía de extrema simplificación del proyecto, de manera de extender los márgenes de fiabilidad y la base de uso de nuestros productos, todos los cuales fueron y son realizados teniendo en cuenta los problemas y las necesidades concretas de cada usuario.

Tanto las versiones pasivas como activas de los sistemas 315, 312 y 210 incorporan un cross-over pasivo de alta calidad, al cual se une un procesador pasivo que optimiza el rendimiento y la linealidad de respuesta del sistema. Además de ello, en los sistemas activos se incluye un procesador activo que controla los parámetros de funcionamiento del amplificador y de los altavoces en tiempo real, para garantizar las máximas prestaciones sin riesgos de sobrecargas ni distorsiones.





## CARATTERISTICHE GENERALI

### Versioni passive e attive:

- Processore audio con crossover passivo che ottimizza la linearità della risposta in frequenza ed il rendimento del sistema.
- Componenti custom.
- Multistrato di betulla ad incollaggio fenolico.

### Versioni passive:

- Ingressi sbilanciati con prese XLR e jack in parallelo.
- Impedenza standard 8 ohm per consentire la massima flessibilità di collegamento.

### Versioni attive (A):

- Amplificatore a MosFet incorporato.
- Processore attivo che ottimizza le caratteristiche specifiche di ogni altoparlante e controlla tutti i comportamenti di lavoro dell'intero sistema, garantendo così una risposta in frequenza costantemente lineare e proteggendo il sistema da sovraccarichi.
- Ingressi bilanciati collegati in parallelo, con prese XLR maschio e femmina.
- Controllo di volume.
- Presa di rete (fusibile incorporato).
- Interruttore di rete.

*I materiali e la costruzione rispettano i più alti standard professionali per assicurare la massima affidabilità.*

## CARACTÉRISTIQUES GENERALES

### Versions passives et actives:

- Processeur audio passif qui optimise la linéarité de la réponse et garantit le meilleur rendement du système.
- Composants custom.
- Bouleau multipli à encollage phénolique.

### Versions passives:

- Entrées asymétriques avec prises XLR et Jack en parallèle.
- Impédance standard 8 ohms pour une souplesse de branchement maximum.

### Versions actives (A):

- Amplificateur incorporée.
- Processeur actif qui contrôle directement tous les comportements de rendement du système en entier, qui est ainsi à l'abri de toute surcharge inutile voir nuisible.
- Entrées symétriques avec prises XLR mâle et femelle en parallèle.
- Contrôle du volume.
- Prise secteur avec fusible incorporé.
- Interrupteur on/off.

*Les matériels et la construction respectent les standards professionnels les plus élevés pour assurer une fiabilité maximum.*

## MAIN FEATURES

### Passive and active versions:

- Audio processor with passive cross-over to optimize the linearity of the frequency response and the efficiency of the system.
- Custom components
- Phenyl-glued multiply birch.

### Passive versions:

- Unbalanced XLR inputs, with jacks wired in parallel.
- 8 ohms standard impedance for maximum connection flexibility.

### Active versions (A):

- Built-in amplifier.
- An active processor that optimizes the specific features of each loudspeaker and provides direct control of the working performance of the whole system, ensuring a constantly flat frequency response and preventing potentially harmful overloads.
- Balanced inputs with XLR male and female sockets wired in parallel.
- Volume control.
- Power supply socket with built-in fuse.
- Mains power switch.

*Components and construction are in line with the highest professional standards to provide maximum reliability.*

## ALLGEMEINE EIGENSCHAFTEN

### Passive und aktive Versionen:

- Audio-Prozessor mit passiver Weiche, um die Linearität zu optimieren und die Effektivität des Lautsprecher-Systems zu erhöhen.
- Spezialanfertigte Komponenten.
- Mehrfach verleimte Platten aus Birkenholz.

### Passive Version:

- Unsymmetrische Eingänge mit parallelgeschalteten XLR- und Klinkenbuchsen.
- Standard 8  $\Omega$  Impedanz für höchste Anschlußflexibilität.

### Aktive Version (A):

- Eingebaute Endstufe.
- Ein Aktivprozessor, der nicht nur die spezifischen Eigenschaften des jeweiligen Lautsprechers optimiert, sondern auch direkt alle Arbeitsvorgänge des gesamten internen Systems kontrolliert und sie auf diese Weise vor schädlichen Überlastungen schützt.
- Symmetrische Eingänge mit parallelgeschaltete XLR-Buchsen (männlich und weiblich).
- Volumenregler.
- Netzbuchse mit eingebauter Sicherung.
- Netzschalter.

*Bauteile und Konstruktion erfüllen höchste professionelle Standards und garantieren maximale Zuverlässigkeit.*

## CARACTERÍSTICAS GENERALES

### Versiones pasivas y activas:

- Procesador de audio con cross-over pasivo que optimiza la linealidad de la respuesta en frecuencia y el rendimiento del sistema.
- Componentes custom
- Multicapa de abedul con cola fenólica.

### Versiones pasivas :

- Entradas desbalanceadas con tomas XLR y jack conectadas en paralel
- Impedancia estándar de 8  $\Omega$  para permitir la máxima flexibilidad de conexión.

### Versiones activas (A):

- Amplificador incorporado.
- Procesador que optimiza las características específicas de cada altavoz y controla todos los comportamientos de trabajo del sistema entero, lo que garantiza una respuesta en frecuencia constantemente lineal y protege el sistema contra sobrecargas.
- Entradas balanceadas conectadas en paralel, con tomas XLR macho y hembra.
- Control de volumen.
- Toma de red (fusible incorporado).
- Interruptor de red.

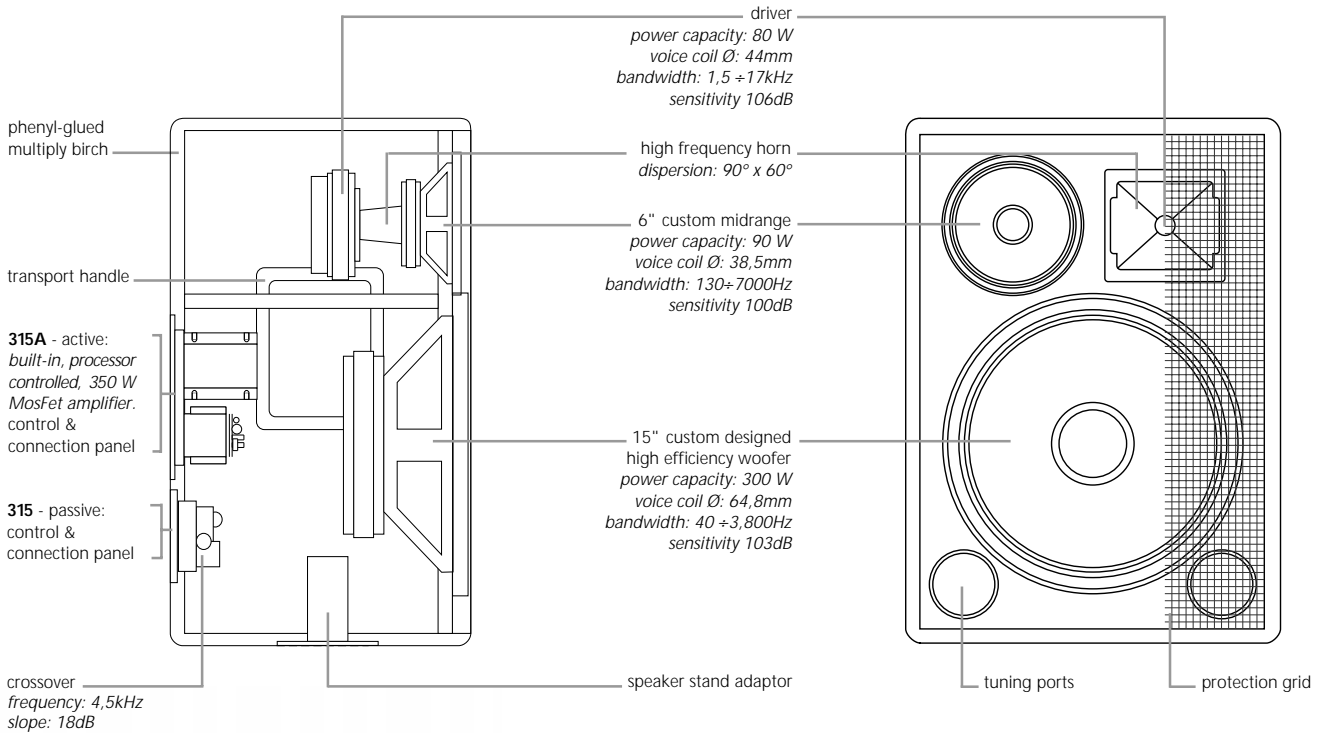
*Los materiales y la construcción respetan los más elevados estándares profesionales para asegurar la máxima fiabilidad.*



# 315-315A



## 315 - 315A



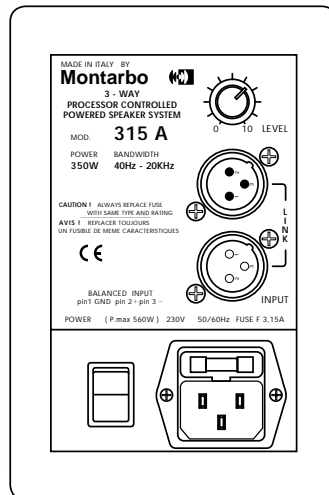
- 3-way bass reflex enclosure
- 15" high efficiency custom woofer
- 6" custom midrange
- high frequency horn (dispersion 90° x 60°)
- Cross-over: 700Hz ± 3,5kHz

Note: in the applications requiring an extension of the low frequency response, it can be combined with the Montarbo subwoofer 118SA)

### 315A

The control and connection panel features:

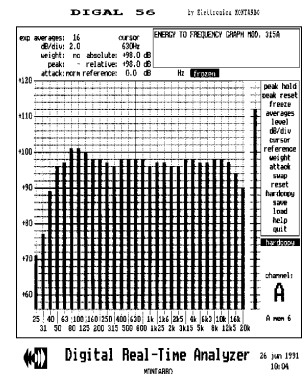
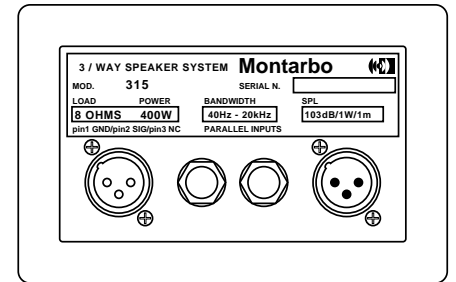
- Volume control.
- Balanced XLR female (in) and male (out) sockets, wired in parallel.
- Mains power switch.
- Power supply socket with built-in fuse.



### 315

The control and connection panel features:

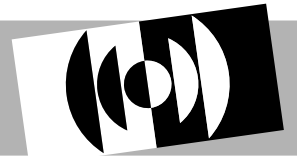
- Unbalanced XLR and Jack connectors wired in parallel.



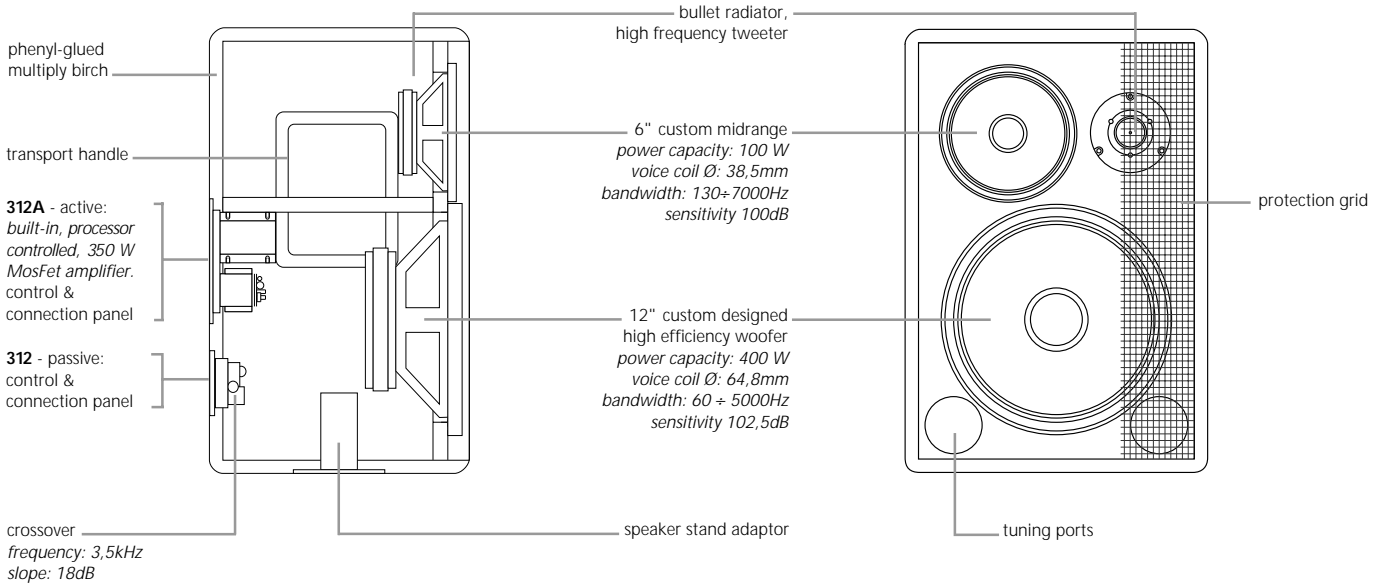
315A frequency response curve (on axis)



# 312-312A



## 312 - 312A



### 312A

The control and connection panel features:

- Volume control.
- Balanced XLR female (in) and male (out) sockets, wired in parallel.
- Mains power switch.
- Power supply socket with built-in fuse.

### 312

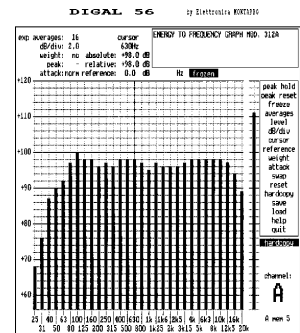
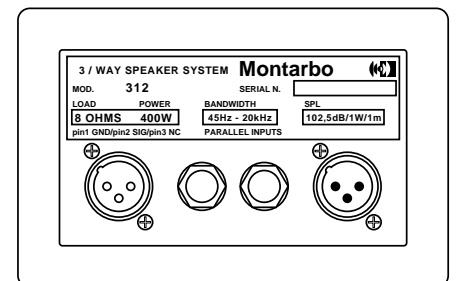
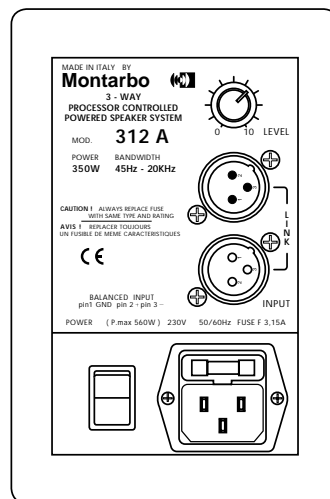
The control and connection panel features:

- Unbalanced XLR and Jack connectors wired in parallel.



- 3-way bass reflex enclosure
- 12" high efficiency custom woofer
- 6" custom midrange
- bullet radiator high frequency tweeter
- Cross-over: 700Hz ÷ 4,5kHz

Note: The model **312A** can be used also as mid/high section in a biamp-configuration (optimum combination with the Montarbo subwoofer 115SA or 118SA)

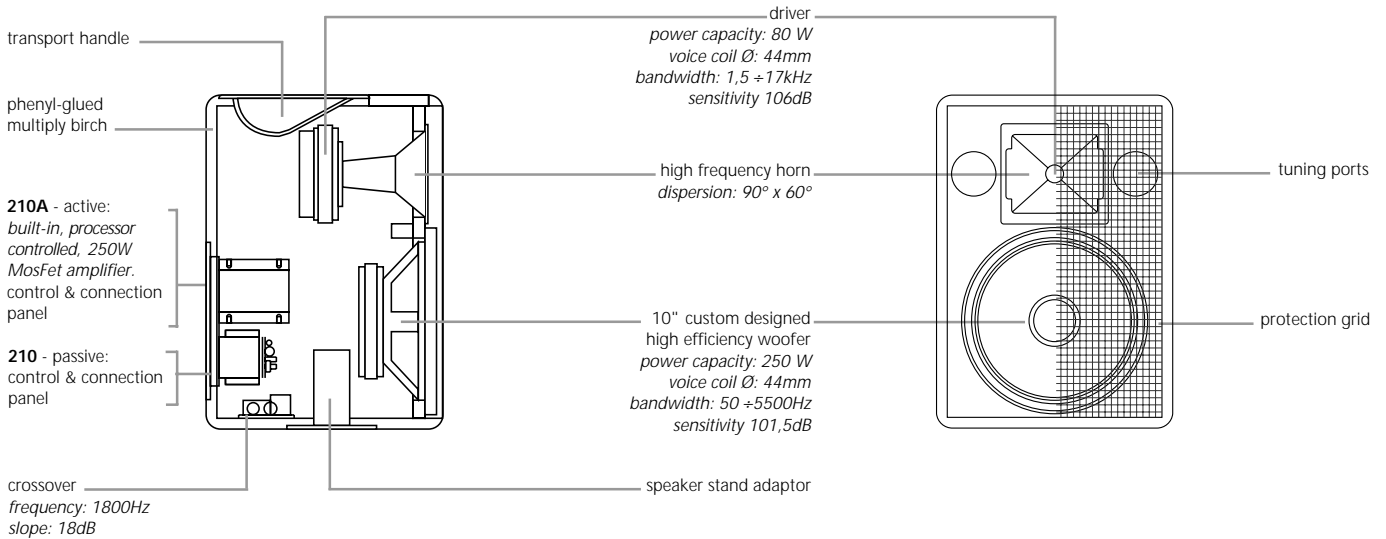


Digital Real-Time Analyzer  
312A frequency response curve (on axis)

# 210-210A



## 210 - 210A



### 210A

The control and connection panel features:

- Volume control.
- Balanced XLR female (in) and male (out) sockets, wired in parallel.
- Mains power switch.
- Power supply socket with built-in fuse.

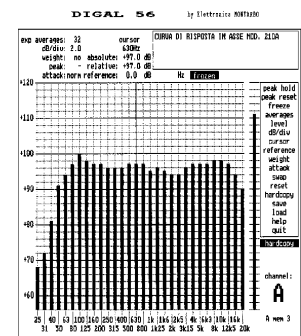
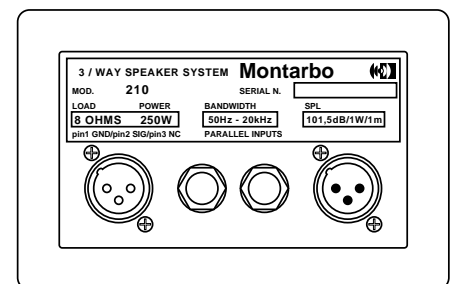
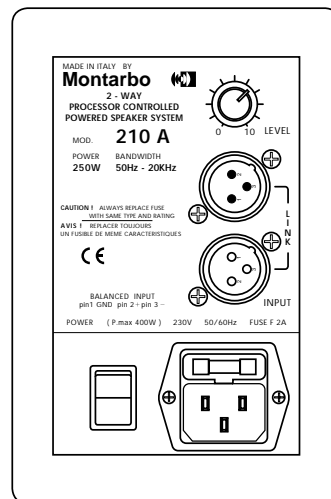
### 210

The control and connection panel features:

- Unbalanced XLR and Jack connectors wired in parallel.



- 2-way bass reflex enclosure
- 10" high efficiency custom woofer
- high frequency horn (dispersion 90° x 60°)
- Cross-over: 1800Hz



210A frequency response curve (on axis)

Note: The model **210A** can be used also as mid/high section in a biamp-configuration (for example: one **210A** with one Montarbo subwoofer **112SA** or one **115SA**, two **210A** with one **115SA** or one **118SA**)

# 315-315A / 312-312A / 210-210A



Technical Specifications	315 / 315A	312 / 312A	210 / 210A
• <i>Enclosure:</i>	3-way bass reflex	3-way bass reflex	2-way bass reflex
Power handling	400 W (continuous)	400 W (continuous)	250 W (continuous)
Impedance	8 Ω	8 Ω	8 Ω
Frequency response	40Hz ÷ 20kHz bass: 40Hz ÷ 700HZ mid: 700Hz ÷ 3,5kHz high: 3,5kHz ÷ 20kHz	45Hz ÷ 20kHz bass: 45Hz ÷ 700HZ mid: 700Hz ÷ 4,5kHz high: 4,5kHz ÷ 20kHz	50Hz ÷ 20kHz bass: 50Hz ÷ 1800HZ high: 1800Hz ÷ 20kHz
Sensitivity (1W, 1m)	103dB	102,5dB	101,5dB
Max SPL	129dB	128,5dB	126dB
Components (custom)			
bass frequencies	15" high efficiency custom woofer	12" high efficiency custom woofer	10" high efficiency custom woofer
mid frequencies	6" custom midrange	6" custom midrange	
high frequencies	high frequency horn (dispersion 90° x 60°)	bullet radiator, high frequency tweeter	high frequency horn (dispersion 90° x 60°)
• <i>Connections:</i>	2 XLR + 2 Jack wired in parallel	2 XLR + 2 Jack wired in parallel	2 XLR + 2 Jack wired in parallel
• <i>Construction:</i>	phenil-glued multiply birch	phenil-glued multiply birch	phenil-glued multiply birch
• <i>Finishing:</i>	polyurethane resin	polyurethane resin	polyurethane resin
Note: for optimum performance we recommend use of a power amplifier providing not less than...			
	200 W into 8Ω	200 W into 8Ω	100 W into 8Ω

## ACTIVE VERSIONS

Amplifier	MosFet - Processor controlled	MosFet - Processor controlled	MosFet - Processor controlled
Max output power	350 Watts <i>continuous</i> / 8 Ω (0,1% THD) 650 Watts <i>peak</i>	350 Watts <i>continuous</i> / 8 Ω (0,1% THD) 650 Watts <i>peak</i>	250 Watts <i>continuous</i> / 8 Ω (0,1% THD) 400 Watts <i>peak</i>
Frequency response	10Hz ÷ 40kHz ±1dB	10Hz ÷ 40kHz ±1dB	10Hz ÷ 40kHz ±1dB
Input impedance	10kΩ (balanced)	10kΩ (balanced)	10kΩ (balanced)
Input sensitivity	0dB (775mV)	0dB (775mV)	0dB (775mV)
Connections	Balanced XLR female (in) and male (out) connectors, wired in parallel.	Balanced XLR female (in) and male (out) connectors, wired in parallel.	Balanced XLR female (in) and male (out) connectors, wired in parallel.
• <i>Dimensions:</i>	50,5 x 71 x 40 cm	41 x 61 x 35 cm	33 x 46 x 32 cm
• <i>Weight:</i>	<b>315:</b> 28 kg <b>315A:</b> 36 kg	<b>312:</b> 23 kg <b>312A:</b> 31 kg	<b>210:</b> 17 kg <b>210A:</b> 22 kg



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Specifications and features are subject to change without prior notice

**Montarbo**

